DOCUMENT RESUME

ED 215 121 CE 031 809

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TITLE Priorities in Vocational Education. Vocational Education Curriculum Specialist, Module 5.
INSTITUTION American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif.; Washington State Univ., Pullman.
SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC.
PUB DATE 81
CONTRACT 300-78-0562
NOTE 44p.; For related documents see CE 031 802-820, ED 132 376-383, and ED 132 401-415.
AVAILABLE FROM East Central Network Curriculum Center, Sangamon State University, E-22, Springfield, IL 62708 ($35.00 for complete set of 16 modules, an instructor's guide, an audio tape cassette, and field test report. Write for individual prices).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adult Vocational Education; Behavioral Objectives; Competency Based Teacher Education; Cooperative Education; *Curriculum Development; Disabilities; Disadvantaged; *Economic Factors; Educational Administration; Higher Education; *Individual Needs; Instructional Materials; Labor Needs; Learning Activities; Learning Modules; Mainstreaming; Nontraditional Education; Nontraditional Students; Older Adults; Postsecondary Education; Program Administration; Program Development; Secondary Education; Simulation; Social Influences; Tests; *Vocational Education; *Work Experience; Work Experience Programs
IDENTIFIERS Curriculum Management; *Priorities; Special Needs Students; *Vocational Education Curriculum Specialists

ABSTRACT

One of five modules in the foundation series of the 16-module series designed to train vocational education curriculum specialists, this module is intended for use in classes or individual study arrangements at the preservice or inservice level by students with varying amounts of experience in vocational education. (These modules are revised versions of earlier study guides--see note.) Introductory materials include an overview, instructions to the learner, detailed list of behavioral goals and objectives, and resources needed to complete learning activities. The module is divided into three sections, each based on one of the goals. The first section analyzes how changes in the economy and labor market affect vocational education and why accurate predictions of labor market needs are difficult to obtain. In section 2 rationales and methods are assessed for providing job experiences to supplement classroom instruction. The third section focuses on vocational education for special student populations. Each section follows a standard format: text, individual study activities, discussion questions, and group activities. A summary of the module follows. Appendixes include material on getting information from the Bureau of Labor Statistics, suggested responses to the study activities, a self-check, responses to the self-check, and recommended references. (YLB)

ED215121

VOCATIONAL EDUCATION CURRICULUM SPECIALIST

# PRIORITIES IN VOCATIONAL EDUCATION

Module 5

U.S. DEPARTMENT OF EDUCATION
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CE 031 809

This module is based upon work done at the American Institutes for Research and Washington State University during 1974-1977 pursuant to contracts with the Office of Education, U.S. Department of Health, Education, and Welfare.

# PRIORITIES IN VOCATIONAL EDUCATION

## Module 5

Jeanette D. Wheeler

Developed by the American Institutes for Research under support from the Office of Vocational and Adult Education, U.S. Department of Education. 1981.

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# INTRODUCTION

## Introduction

The purpose of this module is to provide an overview of priorities in vocational education as created by economic and social factors and established by legislation. In designing vocational education programs, the curriculum specialist must take into account occupational and employment data and predicted demands for new workers. Such information should be coupled with a knowledge of programs and techniques that work--cooperative education, work experience, and sex-fair vocational counseling, to name a few.

Our rapidly changing economy makes it difficult to present information that is current. Yet certain trends in the economic world and in vocational education are evident. For example, the rates of unemployment and underemployment, especially for specific segments of the population, remain high. The impact of many vocational and labor training programs continues to be questioned. The mandates of legislation remain in effect, while demands continue for evidence of effectiveness. In planning curriculum for vocational students, all those influences must be considered. Therefore, this module presents a background from which a curriculum specialist may begin to build vocational programs.

## Overview

The first section of this module examines the problems of making accurate predictions of labor force needs and how those problems relate to planning vocational training programs. One critical issue addressed in this section is whether vocational education has been or can be responsive to economic cycles. Information is also provided about work force characteristics and employer needs. The section then explores labor demands in current and emerging occupations, and describes the students who are entering jobs considered nontraditional for their group.

The module next considers vocational education concepts and practices that provide students with immediate and realistic ties to the work world through cooperative education, work experience, work-study programs, and simulation. Special students and their particular needs are discussed, and the vocational educators' responsibilities to meet these needs are considered.

As the emphasis shifts to individual needs and societal conditions change, vocational educators have had to reinterpret and modify the principles of vocational education. The basic

principles of vocational education--which do not change over time--relate to the optimum use of human resources, to the demands of the economy, and to the needs of society.

Instructions to the Learner

The Self-Check items and possible responses to them are found in the appendices. These questions have two purposes. First, before you begin work on the module, you may use them to check quickly whether you have already learned the information in previous classes or readings. In some instances, with the consent of your instructor, you might decide to skip a whole module or parts of one. The second purpose of the Self-Check is to help you review the content of the modules you have studied in order to assess whether you have achieved the module's goals and objectives.

You can also use the list of goals and objectives that follows to determine whether the module content is new to you and requires in-depth study, or whether the module can serve as a brief review before you continue to the next module.

Goals and Objectives

Goal 1: Analyze how changes in the economy and labor market affect vocational education, and why accurate predictions of labor market needs are difficult to obtain.

Objective 1.1 Describe the changes in technology and the social problems that affect vocational education programs.

Objective 1.2: Identify specific factors that make accurate predictions of labor force needs difficult, and relate the value of accurate long-range predictions of employers' needs to vocational education planning.

Goal 2: Assess the rationales and methods for the growing trend toward providing students with job experiences to supplement in-school instruction.

Objective 2.1: Define and describe the basic components of each of the following program types: work experience, work-study, cooperative education, simulation, on-the-job training, and apprenticeships.

Objective 2.2: Describe the benefits of cooperative education programs for students and employers; describe the difficulties of conducting effective cooperative education programs.

Goal 3: Interpret recent theories, educational objectives, and legislative requirements for providing vocational education for special student populations--the disadvantaged, handicapped, nontraditional students limited-English-speaking persons, and older workers.

Objective 3.1: Discuss the particular training and vocational guidance needs for each of the special student groups.

Objective 3.2: Describe the advantages and the difficulties of "mainstreaming" handicapped, limited-English-speaking, nontraditional, and other special students--for the students themselves, for instructors, and for curriculum developers.

Resources

In order to complete the learning activities in this module, you will need information contained in the following publications:

Evans, R. N., & Herr, E. L. Foundations of vocational education (2nd ed.). Columbus, OH: Charles E. Merrill Publishing Co., 1978.

Wall, J. E. (Ed.). Vocational education for special groups. Sixth Yearbook of the American Vocational Association. Washington, D.C.: American Vocational Association, 1976.

GOAL 1: Analyze how changes in the economy and labor market affect vocational education and why accurate predictions of labor market needs are difficult to obtain.

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## The Changing Economy and Vocational Education

Vocational education priorities are set by law. The Declaration of Purpose of the Vocational Education Amendments of 1976 clearly mandates that vocational education be concerned with all people and their work and be realistic in the light of actual or anticipated opportunities for gainful employment. Actual or anticipated opportunities are affected by the changing economy and the labor market.

### Economic Changes and the Impact of Technology

The problem for vocational educators becomes one of matching "anticipated opportunities for gainful employment" to vocational programs. Yet the economic world seems to act against such astute planning. Technological advances affect occupational stability, creating economic and social changes to which vocational education must react. The last three decades have been a period of unprecedented advances in technology and accelerating competition from worldwide producers. Many of the areas that have seen rapid growth are the ones considered by vocational educators as new and emerging occupations. At the same time the "recognized" occupations seem to be adding technological advances so rapidly that they, too, appear new and emerging. A young farmer trained in agriculture under the early Smith-Hughes programs could hardly compare his vocational training with the agricultural "science" of today!

Changes in technology. Some of the newer occupational fields hold great promise for planning future vocational programs because they respond to social needs as well as economic changes. Energy technology is perhaps the most critical area today; finding and developing new energy sources may well require a complete range of technologies. Health technology has grown increasingly sophisticated, using many of the techniques and instruments developed in the space industry. In addition, life spans have lengthened, and the demand for

national health care has grown. Such changes continue to create the need for workers in all health fields.

Production technology through automation has increased the national capacity to produce goods and food while increasing efficiency of production. At the same time, many jobs have become obsolete, and the need for retraining programs continues. Information technology with the computer and its components continues to be a wonder industry. The nationwide search for skilled technicians hasn't slowed since the inception of the industry. Communications and space technologies are tied closely together. Useful applications of knowledge from space technology continue to spread, with a vast array of new occupations emerging.

Energy conservation. We now know that our natural resources are not inexhaustible and that we need to conserve energy. Economic and political considerations make reliance on imported oil unwise. In addition, further development of our domestic supplies of oil, natural gas, nuclear power, and coal is hampered by various problems. A readily available solution is conservation, which could produce energy savings of 30 to 40 percent. Such savings would be equivalent to the elimination of all imported oil.

It is appropriate for vocational education to have a prominent part in meeting the nation's energy conservation needs. Vocational education programs are being developed or adapted to train students to improve the quality of our environment, assist in urban rebuilding, develop better mass transportation, and develop alternative energy sources. For example, "energy conservation and use" technicians are being trained to find ways to improve energy use in business, industry, and homes.

Vocational education is also addressing itself to the nation's conservation goals, as outlined in the National Energy Conservation and Policy Act, by recognizing that new skills and knowledge will be required of people in existing as well as emerging trades and professions. Efforts are underway to modify present curricula in virtually every occupation in industries where energy is a factor. These efforts are aimed at redesigning instructional skills-training practices in order to teach people to be more effective in their use of energy. One objective of such efforts has been to develop awareness of the seriousness of the energy situation as it applies to the future employee's workplace, home, and community. The other objective has been to motivate people to practice energy conservation at all times.

The challenge to vocational education is to develop an infusion system that will provide students and educators with the best available information on energy use, conservation, and environmental quality and that will produce the desired changes in their attitudes and behavior.

## Social Changes and the Work Force

While vocational education must continue to respond to changes in technology and in the economy, it must not lose sight of the changes taking place in the needs and priorities of the public. The social and economic inequalities between groups of people in our society are evident. Disadvantaged citizens continue to voice their dissatisfaction with low-paying jobs that have little future or interest for them. Vocational education legislation has attempted to set priorities relating to these changes in society.

Movement toward sexual equality. Women have been struggling to realize their full potential as humans and--equally vital to them--to widen their options in vocational training and employment. The movement for sex equity in vocational education recognizes that a tremendous number of women have entered the labor force. About half of the women in the country over 16 years of age are working outside the home, and women now make up 41 percent of the labor force. But the occupational segregation that continues to exist results in low wages and a heavy concentration of women workers in a few traditionally female occupations.

Priorities for the disadvantaged. For the first time specified by law, the Vocational Education Act of 1963 authorized programs for people with disadvantages that have impeded their education for work. Those disadvantages included academic, social, economic, physical, and mental barriers. The 1968 amendments reinforced the emphasis on the disadvantaged. The civil rights movement of the 1960s and the war on poverty did result in programs and policies intended to alleviate the problems of minorities, the poor, and the handicapped, but an enormous need remains. Vocational education is still viewed as a means of bringing the disadvantaged into the majority society. Two of the eight priority areas announced in December 1978 by Daniel Dunham, then chief of the U.S. Office of Education's Bureau of Occupational and Adult Education (BOAE), are:

- to respond positively to the increasingly important issue of equity for women, minorities, and other groups; and

- to continue to improve services to the handicapped and disadvantaged.

Youth unemployment and vocational education. Another priority of vocational education is "expanding and improving programs for youth in inner cities and isolated rural America." The drive to lower youth unemployment rates is also behind the coordination efforts that must be made between Department of Labor (DOL) youth training programs and vocational education. As Table 1 shows, the youth unemployment picture is bleaker now than ever before. A 1978 estimate of minority male youth unemployment stood at 40 percent. Current youth unemployment figures by region and nationwide, by sex and ethnicity can be obtained from the U.S. Department of Labor, Bureau of Labor Statistics.

TABLE 1

Unemployment Percentages for 18-19 Year-Olds

| | Lowest % between 1948 and 1976 | Highest % between 1948 and 1976 | % in 1975 | % in 1976 |
|---|---|---|---|---|
| White Males | 6.7 | 17.2 | 17.2 | 15.5 |
| Black Males | 8.1 | 34.0 | 32.9 | 34.0 |
| White Females | 6.0 | 16.1 | 16.1 | 15.1 |
| Black Females | 9.9 | 38.3 | 38.3 | 35.0 |

Source: U.S. Department of Labor, Bureau of Labor Statistics, 1977

## Predicting Work Force Needs

Planning vocational programs for all segments of society has entailed the predicting of short- and long-term work force needs. This was especially true when a primary objective of vocational education was to meet the nation's labor needs. Making accurate predictions, however, seems almost impossible, given the myriad influences and pressures that act upon the labor market and the economy.

First, there are limited means of data gathering and an incomplete knowledge of work force variables. Most employers don't know what their need for workers will be five years in advance. And the difficulties are not limited to industry or to vocational educators. Witness the number of unemployed school teachers today! The inability to forecast the effects of a declining birth rate played a part in the surplus teacher situation.

Next, there are a variety of workers entering the work force from various non-school sources. Educators may be able to estimate the number of graduates expected in two or four years who are trained in certain occupational areas, but employers are being supplied with applicants from many places. Two trends add to the uncertainty of accurate predictions: geographic mobility and career mobility. People continue to move around the country, relocating for many personal and professional reasons. Waves of migration within the country have occurred from rural to urban areas (e.g., from rural South to urban North for jobs in World War II industries) and, more recently, from areas of depressed employment to highly skilled technological jobs with semiconductor and computer firms.

Career mobility today often means more than simply changing jobs within the same occupational cluster. People are making more mid-career changes that require complete retraining and additional education. Obsolescence of technologies causes some mid-career changes, particularly when highly specific skills are not easily transferred to new jobs. Individuals may also make such changes after reexamining their attitudes toward work and determining to seek jobs that fulfill personal goals and ambitions. Additionally, women whose families are grown or who become single heads of household or displaced homemakers through death or divorce are entering the work force after many years of being full-time homemakers.

Finally, the demands for certain occupations fluctuate, with cycles of increasing and decreasing opportunities. For example, technological changes in agribusiness have reduced the number of workers necessary to produce the same amount of food. Other technological changes have caused an increase in occupations that are service-oriented and that are entirely new. Environmental control specialists; new highly specialized medical technicians; and computer programmers are examples of jobs that have emerged over the last generation.

Making accurate predictions would require the gathering of data from many sectors: education, business, industry, demographic sources, science, economics, government, social agencies, and so on. The information would need to be analyzed to

show trends over long periods of time and the interaction of these trends. Political and economic pressures from the rest of the world would also need to be taken into account. Although the difficulties of making accurate predictions are many, increasingly sophisticated technology should facilitate steady progress toward more useful analyses of future work force needs.

## Individual Study Activities

1. Supplement the information in the preceding narrative by reading Evans, R. N., & Herr, E. L. Foundations of vocational education (2nd ed.). Columbus, OH: Charles E. Merrill Publishing Co., 1978, pp. 9-24, 89-113. You may also be interested in reading the seventh AVA Yearbook, Vocational Education and the Nation's Economy, 19[illegible], edited by Warren G. Meyer. This yearbook relates the nation's economy to vocational education. In particular, pages 15-57; 117-135; and 153-169 discuss topics related to this module.

2. Probably the most current information about labor force needs and priorities can be found in the publications of the U.S. Department of Labor, the Employment and Training Administration, the Bureau of Labor Statistics, and the Office of Information. Most state and local employment offices also publish lists of information sources. A list of publications is included in the Appendices of this module.

   Obtain three or four current documents relating to labor needs and priorities by calling or writing to the sources suggested above. Review and summarize the documents, considering the following points:

   - Title, cost, publishing agency, address
   - Overview of contents
   - Usefulness to vocational educators/curriculum specialists
   - Usefulness to vocational students/advisory groups/ parents/etc.

   As a class, you may wish to compile a master list of information sources. Be sure the list includes current documents and information specific to your state or region.

## Discussion Questions

1. Discuss social and technological changes that cause the demand for occupations to increase or decrease.

2. Consider some of the emerging occupations for which training is being planned or is now offered in your region of the country. Discuss how local expansion in these occupations compares with nationwide demands in these same fields.

Determine which occupations are likely to increase in demand in the near future and which are likely to decrease.

3. Consider and discuss your responses to the following statements and opinions commonly voiced by students and workers in this country:

   - It doesn't matter what you know--it's whom you know that counts when it comes to getting a good job.
   - Finishing high school isn't as important as getting the experience by working. employers train you the way they want to anyway.
   - For minorities vocational education is just one more way to keep them in low-income, blue-collar work. They should be encouraged to go to college instead.
   - Training women for jobs in nontraditional ocupations just takes those jobs away from men who need the work to support their families.

Group Activity

1. Within a small group, select an area of vocational education. This may be your group's area of specialization such as business and office occupations, agriculture, etc., or be an area with which the group is familiar. Identify the ways in which the following social and economic forces might affect the planning for an instructional program in the occupational area you select.

   (a) equal employment opportunities for the handicapped

   (b) affirmative action programs for hiring women and minorities

   (c) conservation of energy and other natural resources

   (d) reduction of pollution and waste

   (e) freedom to select individual work and life styles

   For example, if you select law enforcement as the instructional program to be planned, (b) affirmative action to hire women and minorities will affect program entrance requirements. All testing must be performance-based and be sex-fair and racially unbiased; counseling and placement, of course, must be equally free of stereotyping.

GOAL 2: Assess the rationales and methods for the growing trend toward providing students with job experiences to supplement in-school instruction.

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## Job Experiences to Supplement Classroom Instruction

Although job experience as an adjunct to school instruction is not new, it has become increasingly important. Of the instructional innovations that have emerged from vocational education, job experience programs provide the most effective transition between school and the world of work. Described below are several types of job experience programs: cooperative education, work experience, work-study, simulation, and community-based training.

### Cooperative Education

These programs require a cooperative arrangement between schools and employers, allowing students to obtain vocational instruction in school and related on-the-job training through part-time employment. Common features of cooperative programs are: the systematic progression of acquired skills and techniques through a definite pattern of learning experiences on the job; occupational orientation and job counseling together with technical instruction in school; coordination of school and work activities through job visitations by school personnel; cooperative school and employer development of appropriate, parallel classroom and job experiences; and school credit for employment training and related school work.

Career education concepts also play an important part in cooperative education. Students are able to explore occupational fields in real work settings and can relate their interests and abilities directly to work situations. In addition, special students, such as the handicapped, can be provided with supportive and nonthreatening experiences that afford them the feelings of success and achievement so necessary for their self-confidence.

## Work Experience Programs

Work experience programs are another form of providing job experience for students. Their purpose is to provide supervised part-time employment of students to help them acquire desirable work habits and attitudes. They differ distinctly from cooperative education because the part-time jobs held by students need not be related to the students' occupational objectives. Work experience is not coordinated with school instruction, and the role of the school is usually limited to approval of the job.

## Work-Study Programs

Work-study is yet another form of job experience for the student and differs from both cooperative education and work experience programs. The main purpose of work-study is to provide students with financial support to enable them to stay in school. Work-study is a program designed to provide financial assistance through part-time employment to students enrolled full-time in vocational education programs who require such aid to continue in vocational training. The part-time employment is based on the financial need of the student and is not necessarily related to career objectives. Federal money is often used by local education agencies to support work-study programs. A common example is students enrolled in vocational programs at community colleges who work part-time as library aides, clerical help, or facility maintenance personnel while they attend classes.

## Simulation

Simulation is a means of gaining job experience within an instructional context. It reduces the level of abstraction inherent in written materials and falls somewhere between "talking about" and "doing" the job. Simulation is a learning process that involves students as participants in role presentations or games imitating real-life situations or environments. It provides a classroom setting for learning skills in manageable steps. Since time periods can be compressed, feedback to the learner is more rapid and mistakes less damaging than on an actual job. Students are given the chance to develop and practice skills under conditions similar to those on the job; this eases the transfer of learning from the classroom to the work place. The drawbacks of simulation, of course, are that reality may be somewhat distorted and that actual job experiences may be much more motivating to some students.

## Community-Based Training

Apprenticeship programs run by unions are usually tied into adult, area vocational school, or community college vocational programs. Apprentices obtain their jobs most often through union hiring procedures, and attend classes for a specified number of hours to reach each salary and skill level. Classes may be taught by regular faculty of the educational institution or by union-hired and paid instructors. On-the-job training programs are another form of community-based training. These programs involve an on-site cooperative arrangement that follows an in-school basic vocational training program. Such programs are often the first step for placement in entry-level jobs or in apprenticeships.

## Planning Job Experience Programs for Students

Vocational educators and, in particular, curriculum specialists are faced with the problem of creating community-based work experience situations for students. Not every community may be able to provide job experience stations for each in-school job training program. Unemployment levels, transportation difficulties, availability of supervisory personnel, and financing administration expenses are all factors that can affect community-based training. Despite the problems inherent in finding work-experience stations in the community, placing students in those stations, and relating in-school curriculum with on-the-job learning, most vocational educators agree that the employment potential of an individual is enhanced by cooperative work experiences.

Steps to developing and maintaining such programs are similar to those used in curriculum development in general. First, contacts and assessments of possible community work sites must be made. Valuable allies in this task are the members of local advisory councils. They represent the businesses and industries of the community and have already manifested a commitment to vocational education by becoming advisory group members. Next, a match of in-school courses and job placements should be made. Finally, the supervision of community-based training must be consistent, with designated personnel following up on students who encounter problems in the field, and helping employers work with youth. The key to successful school-related training lies in treating students, both in-school and on-the-job, as responsible workers.

Advantages of job experience programs include the following:

- School or district costs of job training can be reduced by using available community resources and equipment.

- Education and employment goals become more consistent and related.

- The community becomes more involved and interested in education.

One further dimension of job experience programs should be mentioned. Such programs can provide the first opportunity for potential employers to appreciate the skills, job attitudes, and motivation of special students. Placing a female student at a nontraditional work site or a physically limited student with an employer who has never had a handicapped employee requires extreme sensitivity and careful preparation on the part of the vocational educator. The rewards of such successful placements in cooperative work experience situations can be invaluable to all concerned.

## Individual Study Activities

1. Complete the following chart to review and clarify various job experience programs providing vocational training. Reproduce the chart on a separate sheet of paper to give you enough space to fill in the various parts.

| Program | Main Features | Advantages | Disadvantages |
|---|---|---|---|
| Work-Study | | | |
| Work Experience | | | |
| Cooperative Education | | | |
| On-the-Job Training | | | |
| Apprenticeship | | | |
| Simulation | | | |

2. Respond in writing to the following questions: Why is work-study an important aspect of vocational education programs for the disadvantaged? How might cooperative education be particularly beneficial to a disadvantaged student?

## Discussion Questions

1. Do you feel that job experience programs will improve the situation of the disadvantaged and the unemployed?

2. Discuss the benefits of cooperative education for the school, the student, the employer, and the community.

3. Training people to meet the employment needs of their local community may run counter to the focus of vocational programs that are based on the needs of the individual. Discuss this paradox and try to arrive at a consensus. Can both needs be met?

Group Activity

1. Suppose you are a vocational director in a school district with 20,000 students in grades 9-12. Due to a traditional school board and administration, vocational education programs have not changed significantly during the last 20 years. A new board and administration are now in authority, and they favor strong vocational education programs. They invite you to a board meeting so they may gain knowledge about changes that have occurred in vocational education. As a class, discuss how you would respond to the following questions.

   (a) "I note that there are no programs of cooperative education with business and industry in our district. Is this because the programs have no value, or because of cost? What do you recommend, and why?"

   (b) "Are cooperative programs more expensive or cheaper than regular school programs? Please explain."

   (c) "Does simulation have a place in vocational education? What are some of its advantages and disadvantages? How does it affect the cost of instruction?"

GOAL 3: Interpret recent theories, educational objectives, and legislative requirements for providing vocational education for special student populations--the disadvantaged, handicapped, nontraditional students, limited-English-speaking persons, and older workers.

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## The Vocational Needs of Special Students

In any consideration of priorities in vocational education, special student populations and their vocational needs must be discussed. Other modules in this series treat these issues in depth. In this section, therefore, we will concentrate on linking legislative mandates to the ways that special student populations are being served.

In addition to complying with all laws related to vocational education, educators must comply with regulations issued to clarify these laws. These regulations are published in the Federal Register. Once the regulations are approved, they must be implemented. For example, the requirement that each state have a sex equity coordinator is stated in the regulations, not in the law.

### Training and Guidance for Special Students

There is little question that a primary concern of legislators is the needs of "special students." This all-inclusive term is simply a convenient way to categorize the groups or subpopulations of students that need particular efforts to improve their opportunities in life. Specifically, vocational education legislation since the 1960s has emphasized that the problems of special students have inhibited them from participating in regular occupational training programs. Vocational educators, therefore, must be concerned with developing programs that encourage and support training for these special students to ensure their access to the benefits of equal employment opportunities.

The problems of special students such as the handicapped or women who are reentering the labor market are complex. Programmatic solutions to their problems must incorporate more than

simple job preparation. First, curriculum specialists and other vocational educators need to be aware of the laws and of their responsibility to respond to the mandate of those laws. Second, vocational educators should base their curricular decision-making on sound educational premises. This includes a thorough knowledge of the types of limitations involved--educational, physical, social, economic and so on. Next, the proposed programs must be based on a serious consideration of the goals of the individuals themselves and the barriers in and outside the educational realm that have prevented students from reaching those goals.

These requirements imply that a strong counseling support system is vital to the success of any special student. Counseling can occur in many ways: through awareness activities that encourage special students to explore options; peer counseling that provides continual support throughout training; community counseling from employers who offer work experience opportunities; and follow-up counseling to show the continued support of school people for students placed in jobs. Although such comprehensive vocational counseling programs will require many hours of effort beyond that usually offered, the payoffs are gratifying. In studies of programs training women in non-traditional occupations, for example, consistent counseling support has made the difference between success and failure for most of the participants.

## Mainstreaming the Special Student

At some point in the training of special students, the educators' goal may be to consider all students alike; that is, the female in welding or the blind student in office practices can be helped to become "not so special." Of course, some adaptations, particularly for the physically handicapped, need to be made at first. What may take "normal" students five weeks to accomplish may take longer for special students to accomplish. Therefore, the key lies in individualized programs that ultimately result in comparable competencies for all completers. What differ, of course, are the techniques for providing added supportive services for the particular special student.

Preparation for the world of work is undoubtedly more difficult for many special students, particularly since they often lack job experience of any kind. Similar preparation needs to occur with potential employers. The public relations efforts of vocational educators may be one area where advisory committees can have the most impact, especially since many advisory group members are, in fact, the potential employers.

## Nontraditional Vocational Programs

The term "nontraditional" is used to describe students, programs, and occupational areas. For many special student groups, paid employment itself may be nontraditional. Most often the term indicates training and employment in occupations long dominated by other groups. For example, women operating heavy earth-moving equipment and male stenographers are nontraditional employees. The trends are changing slowly, and the numbers of nontraditional students and employees are increasing. Vocational educators, therefore, must make certain that their programs, from recruitment of students to placing them in jobs, do enhance student opportunities in those occupational areas considered nontraditional.

Programs that are nontraditional can include more than students who differ from what has been thought of as traditional. Programs may differ from established ones because the delivery systems are not tied to familiar schedules, credits, and so on. For example, private or proprietary vocational schools attract many students because they offer open entry/open exit curricula and seldom require the "extra" classes public institutions may add on. Training programs funded by CETA and offered within public vocational institutions are an example of nontraditional delivery systems that are becoming more common.

A recent, major thrust in nontraditional vocational programs is the training of vocational students to become successful entrepreneurs. Two segments of the student population are especially in need of this type of training--ethnic minorities and women. While ethnic groups make up 17% of the total population, individuals within such minority groups own only 4% of the businesses in the country. The discrepancy between population percentage and level of business ownership participation rate is even greater for women. While more than 50% of the people in our country are women, only 4.6% of the businesses in America are owned by women. These firms account for 0.3% of the total annual business receipts.

Individual Study Activities

1. Read pp. 15-59 in the sixth AVA yearbook, Vocational Education for Special Groups, 1976. This section provides an overview of the topic discussed briefly under Goal 3.

2. In your own school/district, are any special efforts being made:

   - to recruit students (both male and female) into vocational programs that are nontraditional;
   - to place students in nontraditional work experience, in nontraditional cooperative education arrangements, or in nontraditional jobs;
   - to adapt a vocational program, course, or facility to encourage physically handicapped students to enroll; or
   - to counsel special students into nontraditional options and provide supportive services for them after they enroll or are placed?

   Examine at least one of the above items in detail. You might conduct your examination by looking at enrollment and completion figures, interviewing counselors, reviewing annual vocational education plans, or using another method approved by your instructor.

Discussion Questions

For each of the following statements, discuss arguments supporting or disagreeing with the points of view expressed. In all instances, bear in mind vocational education's charge to develop relevant curricula.

1. There are few jobs, if any, that are inherently masculine or feminine. Occupations formerly male- or female-dominated will be filled by both sexes.

2. Race and sex cannot be factors when filling positions or considering advancements. Competency, past performance, and potential are the realistic criteria to consider in filling jobs and awarding promotions.

3. Rising expectations of women and minorities, legislative mandates for equal employment opportunities, and employer affirmative action programs are all important in the struggle for job equality. Traditional vocational educa-

tion programs have failed to encourage equal opportunities for men, women, and racial and ethnic minorities.

Group Activity

1. Divide the class into small groups and have each group select a different special student subpopulation. Interview students from these subpopulations as well as their employers, counselors and teachers, to obtain suggestions for ways to change existing programs to meet special students' needs.

## Summary

The priorities of vocational education have changed over the years since the early focus on training employees for a few specific occupations. Various factors have had an impact on those priorities--economic, educational, and social. One major shift in focus has been from meeting needs of the employers to meeting needs of individuals. But the fluctuations of the nation's economy and technological advances still strongly affect the plans of vocational educators.

The influence of the economy can most readily be seen by curriculum developers who are required to examine predictions for future labor force needs. Obtaining accurate predictions, however, remains a difficult task because many factors interact and impinge on the outcomes. Among those factors are the career and geographic mobility of workers, changes in immigration patterns, the lack of accurate input from industry and business training programs, the lack of adequate follow-up of employees, and fluctuations in the birth rate.

Social factors related to economic ones have also resulted in a rapidly increasing number of women seeking employment. In addition, career changes of older workers have created an increased demand for retraining, especially in new and emerging occupations. Related to economic influences are the growing concerns over the depletion of traditional supplies of energy, need to conserve these supplies, and the need to develop other, renewable sources of energy.

Varied programs have attempted to bridge the transition from education to work. Among these are work experience and work study programs, cooperative education, on-the-job and apprenticeship programs, simulation, and training in community-based programs sponsored by business, industry, and labor.

An effort has also been made to provide vocational training to a wide variety of special student subpopulations. These special populations include the physically handicapped; the limited-English speaking; women and minority students; and other educationally, socially, or economically disadvantaged students who cannot take full advantage of vocational programs as they have existed.

# APPENDICES

## How to Get Information from the Bureau of Labor Statistics (BLS)

### What Information BLS Produces

1. National Economic Statistics

   - Monthly release of Consumer Price Index, Producer Price Index, and a report on the employment situation
   - National trends in wages, work stoppages, productivity, labor costs, labor turnover

2. State and Area Economic Statistics

   - State unemployment rates, Consumer Price Indexes for metropolitan areas, wage rates for occupations common to regional industries
   - Local and state unemployment statistics for determining revenue sharing, federal assistance, Comprehensive Employment and Training Act (CETA) fundings

3. Industry Statistics

   - Employment, earnings, prices, productivity, and technology statistics
   - Data on major industry sectors such as mining and manufacturing, on specific or selected industries such as clothing and textiles
   - Statistics measuring performance of industries over time and comparing performance among industries

4. Information about the Labor Force

   - Composition of the labor force by race and sex, level of education of workers and the unemployed, reasons for unemployment, special employment problems of teenagers, blacks, women
   - Special labor force studies examining work experiences of recent college graduates and number of people going back to school after age 35

5. Economic Projections

   - Estimations of economic growth in 10-15 years in 160 industries

6. Occupational Outlook

   - Projections of economic growth and employment needs by industry

7. Consumer Expenditure Studies; Labor-Management Information; International Statistics; Occupational Safety and Health Statistics

Where to Find BLS Information

1. News Releases

   (copies available to public upon request)

2. Periodicals: Seven periodicals are available by subscription providing comprehensive reports and analyses of current data

   - Monthly Labor Review--research journal in economics, includes analytical articles, 40 pages of current statistics, reports ($16/yr.)

   - Employment and Earnings--comprehensive monthly report of current data on employment, unemployment, hours, earnings, labor turnover for the nation, individual industries, states, and selected local areas ($18/yr.)

   - Current Wage Developments--monthly periodical reporting on collective bargaining settlements, wage and benefit data, compensation trends ($12/yr.)

   - Producer Prices and Price Indexes--comprehensive monthly report on price movements of both farm and industrial commodities, by industry ($16/yr.)

   - CPI Detailed Report--monthly, comprehensive data on movements in the Consumer Price Index by expenditure group, by item, and by city ($12/yr.)

   - Chartbook on Prices, Wages, and Productivity--monthly and historical trends of key economic indicators in both statistical tables and charts ($11/yr.)

- Occupational Outlook Quarterly*--periodical for helping high school students and guidance counselors assess career opportunities ($4/yr.)

3. Handbooks

(Reference handbooks sold by Government Printing Office and by BLS regional offices)

- Handbook of Labor Statistics--annual volume of the major statistical series produced by BLS, including both current and historical data ($5.50)

- BLS Handbook of Methods--technical descriptions of major BLS programs, including data produced, their sources, and collection methods ($350)

- Occupational Outlook Handbook*--published every two years, describes what workers do on the job, their average earnings, the training and education required, the places of employment, and the employment outlook for over 400 occupations in 40 major industries ($8)

4. Bulletins

Series includes 100 area and industry wage studies each year and 50 miscellaneous volumes dealing with prices, productivity, economic growth, etc. Examples of current publications are:

- Workers of Spanish Origin: A Chartbook displays data in 33 charts and 18 pages of tables to relate characteristics of Spanish-American workers to other labor force groups--available in English and in Spanish ($2.40)

- U.S. Workers and Their Jobs: The Changing Picture--A Chartbook designed for classroom use depicts changes in the economy and labor force ($.60)

- U.S. Working Women: A Databook provides 61 tables of information on the characteristics of U.S. working women ($2.50)

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*A Reminder: Occupational outlook publications may be eligible for purchase by schools under Title IV-8 (libraries and learning resources) of the Elementary and Secondary Education Act and under Title I, programs for disadvantaged students.

5. Other Publications

   A series of pamphlets, reports, summaries distributed free by BLS national and regional offices. Examples include:

   - Just Published--a monthly listing of new BLS publications
   - Where to Find BLS Statistics on Women
   - Liberal Arts and Your Career--one of 11 leaflets describing jobs available in academic fields

6. Regional Publications and Releases

   Eight regional offices publish reports of regional interest

7. Data Tapes and Microfiche

   Listed in publications lists and available through regional and national offices

8. Your Public Library--most subscribe to BLS periodicals and have current BLS publications in the reference section

Where to Write or Call for Information

1. U.S. Dept. of Labor
   Bureau of Labor Statistics
   Washington, D.C. 20212

2. Superintendent of Documents
   Government Printing Office
   Washington, D.C. 20402

3. U.S. Dept. of Labor
   Bureau of Labor Statistics, Regional Offices:

   450 Golden Gate Ave.
   Box 36017
   San Francisco, CA 94102
   (415) 556-4678

   911 Walnut St.
   Kansas City, MO 64106
   (816) 374-2481

   555 Griffin Square Bldg.
   Dallas, TX 75202
   (214) 749-3516

Federal Office Bldg.
230 S. Dearborn St.
Chicago, IL 60604
(312) 353-1880

1371 Peachtree St., N.E.
Atlanta, GA 30309
(404) 881-4418

1603 JFK Federal Bldg.
Government Center
Boston, MA 02203
(617) 223-6761

Suite 3400
1515 Broadway
New York, NY 10036
(212) 399-5405

3535 Market Street
P.O. Box 13309
Philadelphia, PA 19101
(215) 596-1154

## Self-Check

GOAL 1

1. Name three factors that make it difficult to predict accurately labor force needs.

2. List the major source of accurate, up-to-date labor and work force data available to vocational educators.

3. Effective vocational planning must take into account:

   ____ a. new and emerging occupations

   ____ b. local labor needs

   ____ c. national employment trends

   ____ d. individual interests and needs

   ____ e. all of the above

4. Name three technical occupational areas that hold great promise for future employment of vocational students.

5. What three major population groups have been the focus of vocational programs authorized over the last 15 years?

GOAL 2

1. The primary goal of this type of program is to permit students to earn the money necessary for them to remain in school.

   ____ a. work-study

   ____ b. cooperative education

   ____ c. work experience

   ____ d. career exploration

2. The primary goal of this type of program is to prepare students through on-the-job training in the area of their related vocational training.

____ a. work-study

_____b. cooperative education

____ c. work experience

____ d. career exploration

3. Name one benefit of cooperative education programs to the student, to the school, and to the employer.

4. What are two difficulties associated with cooperative education programs?

5. What is the role of local advisory council members in cooperative education programs?

GOAL 3

1. Define the following terms, as used in vocational education:

- disadvantaged
- mainstreaming
- nontraditional (programs/occupations)

2. For which of the following special groups of students would the least amount of curricular adaptations most likely need to be made?

____ a. physically handicapped

____ b. females

____ c. limited- or non-English-speaking

____ d. economically disadvantaged

## Self-Check Responses

GOAL 1

1. It is difficult to predict future demands for goods and services; employers cannot accurately predict long-range labor needs; workers are mobile geographically and in changing jobs and careers throughout their lifetimes; sources of information about labor needs and supplies come from many institutions outside education; changes in technology (automation, mechanization) may alter needs for certain types of semi-skilled labor.

2. Bureau of Labor Statistics, Department of Labor

3. e

4. energy, health, communications, space, computer, mass transportation, and environmental technologies

5. Your response should include three of the following groups: handicapped, disadvantaged, racial and ethnic minorities, and limited-English speaking students.

GOAL 2

1. a
2. b
3. benefits of cooperative education to:

   students: provides income; provides future job contacts; provides knowledge about actual working conditions in career area of choice while receiving basic education

   schools: expands learning facilities without major expenses of new equipment; improves community relations; can make learning more relevant

   employers: provides supply of motivated, productive workers

4. difficulties in cooperative program include: transportation of students; age restrictions in some fields; health and safety rules in some states; regular, full-time employee attitudes toward students; locating and retaining enough training slots; maintaining adequate school/employer monitoring; layoffs of students caused by economic recessions

5. Advisory council members can offer training slots in their own personal businesses or know about training positions in their own occupational area; can review school programs and related work situations to ensure quality of the training experience; and can assist in placement of students

GOAL 3

1. disadvantaged: includes individuals with educational or socioeconomic problems that prevent them from succeeding in a regular vocational program

   mainstreaming: placing special students in regular vocational programs

   nontraditional (programs/occupations): programs or jobs that have been dominated by one sex (e.g., 75-80% of the students in nursing programs are female, as are nurses on the job; the 20-25% remaining are males, who are considered nontraditional students/employees)

2. b

## Recommended References


1. Achieving sex equity in vocational education: A citizen's guide to the 1976 Vocational Education Amendments. Washington, D.C.: Lawyer's Committee for Civil Rights Under Law, Federal Education Project, 1980.

2. Attebury, J., & Stevens, D. A vocational educator's guide to the CETA system. Arlington, VA: American Vocational Association, 1980.

3. Drier, H. N., & Herr, E. L. (Eds.). Solving the guidance legislative puzzle. Arlington, VA: American Vocational Association, 1978.

4. Entrepreneurship training components: 36 instructional modules. Palo Alto, CA: American Institutes for Research, in press.

5. The Global 2000 report to the President: Entering the 21st century. Washington, D.C.: Council on Environmental Quality, 1980.

6. Lamar, C. F. (Ed.). Comprehensive planning for vocational education: A guide for administrators (Eighth Yearbook of the American Vocational Association). Arlington, VA: AVA, 1978.

7. Law, G. F. (Ed.). Contemporary concepts in vocational education (First Yearbook of the American Vocational Association). Washington, D.C.: AVA, 1971.

8. Meeting energy work force needs. Silver Spring, MD: Information Dynamics, Inc., 1980.

9. Occupational Outlook Handbook. Bureau of Labor Statistics, U.S. Department of Labor. Washington, D.C.: Government Printing Office, published biennially.

10. Thompson, J. F. Foundations of vocational education: Social and philosophical concepts. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1973.

11. Youth unemployment: Solving the problem. Arlington, VA: American Vocational Association, 1978.

## VECS Module Titles

Module 1: Vocational Educators and Curriculum Management

Module 2: The Scope of Vocational Education

Module 3: Organization of Vocational Education

Module 4: Legislative Mandates for Vocational Education

Module 5: Priorities in Vocational Education

Module 6: Vocational Education for Students with Special Needs

Module 7: Vocational Needs Assessment and Curriculum Development

Module 8: Conducting Task Analyses and Developing Instructional Objectives

Module 9: Selecting Instructional Strategies and Assessing Student Achievement

Module 10: Relating Learning Differences and Instructional Methods

Module 11: Selecting and Preparing Instructional Materials

Module 12: Evaluating Vocational Education Curricula

Module 13: Conducting Follow-Up Studies and Communicating Evaluation Results

Module 14: Managing Vocational Education Programs

Module 15: Preparing for Curriculum Change

Module 16: Staff Development